

Application No. 09/998,590
Amendment "C" dated April 5, 2006
Reply to Office Action mailed February 6, 2006

REMARKS

These remarks and the accompanying amendments are responsive to the Office Action made final and dated February 6, 2006 (hereinafter referred to as the "Office Action"). At the time of the last examination, Claims 2-10, 13, 16-19, 21, and 28-33 were pending. The Office Action allowed Claims 2-10, 13 and 28-30, and rejected Claims 16-19, 21 and 31-33. The applicants respectfully traverse the rejection and request reconsideration in light of these remarks.

Section 2 of the Office Action rejects Claims 16-19, 31 and 32 under 35 U.S.C. 103(a) as being unpatentable over German patent number DE 19830841 A1 to Schulz (hereinafter, "Schulz") in view of United States patent number 6,882,727 issued to Vialen et al. (hereinafter, "Vialen") and further in view of United States patent number 6,791,963 issued to Hwang et al. (hereinafter, "Hwang").

Regarding Claim 16, page 3 of the Office Action asserts that although Schulz fails to disclose wherein the information of the signal includes information of a synchronization channel based on the TDD method, that Vialen (USP 6882727) teaches (in column 7, lines 41-45) using physical layer transport control channels in FDD and TDD modes, and further that Vialen discloses (in column 7, lines 45-55 and column 8, lines 5-10) utilizing an SCH down-link channel for broadcasting synchronization information to several user equipment in the TDD mode. Thus, the Office Action concludes, it would have been obvious to one of ordinary skill in the art to modify the teachings of Schulz to include the features of the downlink signal having SCH channel based on TDD as taught by Vialen.

However, Vialen teaches that "The SCH is a down-link channel used for broadcasting synchronization information to an entire cell in the TDD mode" (Col. 8, lines 5-7). This only

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discloses that the SCH transmits synchronization information, or in other words, information to be used in the synchronization. That is, Claim 16 includes information of a signal based on a TDD method (including information of the synchronization channel) in a signal based on an FDD method, and transmits the signal based on the FDD method.

In contrast, even if Schulz and Vialen et al. are combined (the appropriateness of which not being conceded), it results in that in Schulz, SCH based on the TDD method is transmitted, and therefore the synchronization information (information to be used in the synchronization) is only transmitted via such channel (SCH) based on the TDD method. Thus, the combination would not lead to the feature of Claim 16 that information of a synchronization channel based on a TDD method is included in a signal based on an FDD method, and the signal based on the FDD method is transmitted.

Therefore, Claim 16 is not unpatentable over even the combination of Schulz and Vialen. Further, Hwang also does not disclose the feature of Claim 16 that information of a synchronization channel based on a TDD method is included in a signal based on an FDD method, and the signal based on the FDD method is transmitted.

Therefore, Claim 16 is not unpatentable over even the combination of Schulz, Vialen, and Hwang, although the appropriateness of the combination is not conceded. Claim 17 depends from Claim 16, and is thus patentable over even the combination for at least the reasons provided for Claim 16. Furthermore, Claim 31 is similar to Claim 16, except that it recites a base station including various means for performing the method, rather than the method itself. Thus, the same arguments applied for Claim 16 may be used to show that Claim 31 is not unpatentable over the combination.

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Regarding Claim 18, page 5 of the Office Action asserts that although Schulz fails to disclose wherein the information of the signal includes information of a common control channel based on the TDD method, that Vialen teaches (in column 7, lines 41-45) using physical layer transport control channels in FDD and TDD modes, and further that Vialen discloses (in column 8, lines 25-34) utilizing a CCCH (common control channel) bi-directional channel for transmitting control information between network and to several user equipments in the possible TDD mode. Therefore, the Office Action concludes, it would have been obvious to one of ordinary skills in the art to modify the teachings of Schulz to include the features of the bi-directional signal having CCCH channel based on TDD as taught by Vialen.

However, "The CCCH is a bi-directional channel for transmitting control information between the network and the UEs." of column 8, lines 31-34 of Vialen only discloses that the CCCH transmits control information. That is, Claim 18 includes information of a signal based on a TDD method (including information of the common control channel) in a signal based on an FDD method, and transmits the signal based on the FDD method.

In contrast, even if Schulz and Vialen are combined, the combination results in that in Schulz, CCCH based on the TDD method is transmitted, and therefore the control information is only transmitted via such channel (CCCH) based on the TDD method. Thus, it cannot lead to the feature of Claim 18 that information of a common control channel based on a TDD method is included in a signal based on an FDD method, and the signal based on the FDD method is transmitted.

Therefore, Claim 18 is not unpatentable over the combination of Schulz and Vialen. Further, Hwang also does not disclose the feature of Claim 18 that information of a common

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control channel based on a TDD method is included in a signal based on an FDD method, and the signal based on the FDD method is transmitted.

Therefore, Claim 18 is not unpatentable over even the combination of Schulz, Vialen and Hwang. Claim 19 depends from Claim 18, and is thus patentable over even the combination for at least the reasons provided for Claim 18. Furthermore, Claim 32 is similar to Claim 17, except that it recites a base station including various means for performing the method, rather than the method itself. Thus, the same arguments applied for Claim 17 may be used to show that Claim 32 is not unpatentable over the combination.

Section 3 of the Office Action rejects Claims 21 and 33 under 35 U.S.C. 103 as being unpatentable over Shulz in view of United States patent application serial number 6,839,333 issued to Akerberg (hereinafter "Akerberg").

Regarding Claim 21, page 12 and 13 of the Office Action assert that Schulz fails to explicitly disclose that the information of the signal based on the TDD method includes at least one of information relating to a position of the signal of the communication channel within a frame of the signal based on the TDD method and information relating to a timing offset between the signal based on the TDD method and the signal based on the FDD method. However, the Office Action further contends that Akerberg discloses in Figure 11, column 8, lines 13-26 a TDD/FDD system including information relating to a timing offset between signals based on the TDD and FDD method, and a dynamic channel selection method locks onto the corresponding channel and adjusts the timing in accordance with the offset, and therefore it would have been obvious to one of ordinary skill in the art to modify the teachings of Schulz to include the teachings of acquiring information relating to timing offset between signals based on the TDD and the FDD method as taught by Akerberg.

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However, considering column 7, lines 10-14, column 7, lines 53-58, column 8, lines 6-9, etc. of Akerberg, "offset" in column 8, lines 13-26 of Akerberg only means an offset between a set of base stations and another set of base stations. In Akerberg, there is no description that one set of base stations transmit signals based on a TDD method, and the other set of base stations transmit signals based on an FDD method.

Thus, Akerberg does not disclose a timing offset between a signal based on a TDD method and a signal based on an FDD method. Schulz also does not disclose a timing offset between a signal based on a TDD method and a signal based on an FDD method as correctly pointed out by the Office Action. Therefore, even if Shulz and Akerberg are combined (the appropriateness of which is not conceded), Claim 21 is not unpatentable over the even the combination. The same arguments apply for Claim 33.

Therefore, the applicants respectfully request favorable action on this patent application. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 5th day of April, 2006.

Respectfully submitted,



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